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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,008	08/21/2006	Satoshi Kadokawa	Q96579	6887

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EXAMINER	
YABUT, DANIEL D	
ART UNIT	PAPER NUMBER
3656	

NOTIFICATION DATE	DELIVERY MODE
10/28/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/590,008	KADOKAWA ET AL.	
	Examiner	Art Unit	
	DANIEL YABUT	3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 August 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-30**, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Sada (US Patent 5,885,690).

Sada discloses rolling sliding parts of a surface which contacts another member comprising a(n):

Re claim 1

- Occupation ratio being set from 90% or more to less than 100% (C3 / L38-41)
- Occupation ratio is calculated by dividing a sectional area of a virtual plane in a plane direction at a portion that is positioned at a depth of 2.0 micrometers from the outermost surface position (C3 / L33-37; i.e. Rpk = Ry – depth = 2.22 micrometers – 2 micrometers = 0.22 micrometers) by an area of an overall surface of a portion that contacts the other member
- Outermost surface position is defined as a highest portion out of fine roughnesses existing on the surface (C3 / L33-35; Fig. 1A)

Re claim 2

- Occupation ratio is set from 80% or more to less than 100% (C3 / L38-41)

- Occupation ratio is calculated by dividing a sectional area of a virtual plane in a plane direction at a portion that is positioned at a depth of 1.5 micrometers from the outermost surface position by an area of an overall surface of a portion that contacts the other member (C3 / L33-37; i.e. Rpk = Ry – depth = 1.66 micrometers – 1.5 micrometers = 0.16 micrometers)
- Outermost surface position is defined as a position of a highest portion out of fine roughnesses existing on the surface (C3 / L33-35)

Re claim 3

- Occupation ratio is set from 50% more to less than 100% (C3 / L38-41)
- Occupation ratio is calculated by dividing a sectional area of a virtual plane in a plane direction at a portion that is positioned at a depth of 1.0 micrometers from the outermost surface position by an area of an overall surface of a portion that contacts the other member (C3 / L33-37; i.e. Rpk = Ry – depth = 1.11 micrometers – 1.0 micrometers = 0.11 micrometers)
- Outermost surface position is defined as a position of a highest portion out of fine roughnesses existing on the surface (C3 / L33-35)

Re claim 4

- Occupation ratio of a sectional area of a virtual plane in a plane direction at a portion that is positioned at a depth of 1.5 micrometers from the outermost surface position (C3 / L33-37; i.e. Rpk = Ry – depth = 1.66 micrometers – 1.5 micrometers = 0.16 micrometers), to the area of the surface that contacts the other member is set to 80 % or more (C3 / L38-41).

Re claim 5

- Occupation ratio of a sectional area of a virtual plane in a plane direction at a portion that is positioned at a depth of 1.0 micrometers from the outermost surface position (C3 / L33-37; i.e. Rpk = Ry – depth = 1.11 micrometers – 1.0 micrometers = 0.11 micrometers), to the area of the surface that contacts the other member is set to 50 % or more (C3 / L38-41).

Re claim 6

- An occupation ratio of a sectional area of a virtual plane in a plane direction at a portion that is positioned at a depth of 1.5 micrometers from the outermost surface position (C3 / L33-37; i.e. Rpk = Ry – depth = 1.66 micrometers – 1.5 micrometers = 0.16 micrometers), to the area of the surface that contacts the other member is set to 80 % or more (C3 / L38-41), and also an occupation ratio of a sectional area of a virtual plane in a plane direction at a portion that is positioned at a depth of 1.0 micrometers from the outermost surface position (C3 / L33-37; i.e. Rpk = Ry – depth = 1.11 micrometers – 1.0 micrometers = 0.11 micrometers), to the area of the surface of a portion that contacts the other member is set to 50% or more (C3 / L38-41).

Re claims 7-12

- The rolling sliding part is a roller constituting a cam follower unit (Fig. 3) in which an outer peripheral surface of a roller (11a) supported rotatably around a roller supporting shaft (12) is brought into contact with an outer peripheral surface of a cam (at 7) via a rolling contact.

Re claim 13-18

- The rolling sliding part is a rocker arm (at 3; C5 / L52-59) into a part of which a cam follower unit is incorporated.

Re claims 19-24

- The rolling sliding part is an inner ring (near 13; C5 / L43-51) having a cylindrical inner ring raceway on an outer peripheral surface or a shaft (12).

Re claim 25-30

- The rolling sliding part is a needle (13; C5 / L43-51) that is provided rollably between a cylindrical inner ring raceway and a cylindrical outer ring raceway (Fig. 2)

Response to Arguments

Applicant's arguments filed 8/6/2010 have been fully considered but they are not persuasive.

In response to Applicant's argument that Sada does not anticipate or render obvious the claimed invention, the expression "Rpk = Ry – depth" is recited above to show that the range requirements, 1) Rpk / Ry $\leq$ 0.1 and 2) Ry being between 1 to 3 μm, are satisfied when considering the occupation ratio at the depths of 2.0 μm, 1.5 μm and 1 μm for roughness profiles having an Ry equal to 2.22 μm, 1.66 μm and 1.11 μm, respectively. In other words, it is important to note that it is *possible* to evaluate the occupation ratio at the depths of 2.0 μm, 1.5 μm and 1 μm from the outermost surface position in accordance to the conditions defined in Sada.

Furthermore, Sada discloses that the occupation ratio is *set* to 90%-95%, a range at which *all* of occupation ratios in the respective claim limitations are met. Column 3, lines 38-41 recites

"the ratio of the open area of the very small recesses to the whole area of the rolling contact surface 11a, that is, **the area ratio is set to 5 to 20% and more particularly, 5 to 10%**" (emphasis added). Note that the inverse of the "area ratio" is equivalent to the occupation ratio. Column 4 lines 48-53 recites, "The conditions of the **shot blasting and barrel finishing** may be suitably so set that the surface roughness of the rolling contact surface 11a and the area ratio of the very small recesses are in the above-mentioned ranges" (emphasis added). The implication from the above recitations is that the rolling surface 11a is configured such that the "area ratio" at a depth of 0 μm after shot blasting and barrel finishing as recited above is equal to 5 to 10%, yielding a 90-95% occupation ratio. Additionally, the load curve M shown in Figure 1B illustrates that as the cut level (plane depth) increases, the occupation ratio increases. Therefore, the occupation ratio taken at *any* depth greater than 0 μm must be *at least* 90%, a value that is encompassed by all of the respective claim limitations above. As such, Sada indeed discloses all of the claim limitations.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL YABUT whose telephone number is (571)270-5526. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:00 P.M. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard W. Ridley can be reached on (571)272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DANIEL YABUT/
Examiner, Art Unit 3656
10/21/2010

/Richard WL Ridley/
Supervisory Patent Examiner, Art Unit 3656